```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                      \begin{array}{c} 5 \\ 6 \\ 6 \\ 7 \\ 7 \\ 7 \\ 10 \\ 10 \\ 111 \\ 112 \\ 113 \\ 114 \\ 115 \\ 115 \\ 116 \\ 117 \\ 117 \\ 118 \\ 118 \\ 119 \\ 122 \\ 123 \\ 123 \\ 124 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 125 \\ 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BC
                   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of hits satisfying chosen parameters:
                   1100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

100.0

1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                June 21, 2004, 10:18:09 ; Search time 40.9396 Seconds (without alignments)
4734.482 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-658-782-2
3619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A_Geneseq_29Jan04:*
L: geneserrloor-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1586107 seqs, 282547505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAPITAYAQQTRGLLGCIIT......PAIIPDREVLYREFDEMEEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               geneseqn1980s:*
geneseqn1990s:*
geneseqn2000s:*
geneseqn2001s:*
geneseqn2002s:*
geneseqn2003as:*
geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length DB
           AAW40038
AAE12649
AAE12649
AAE16649
ADC06766
AAP92047
AAR08123
AAB62633
AAB625135
AAR25135
AAR25135
AAR31621
AAR34009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADC06767
AAP90164
AAP92050
AAP90288
AAB18540
AAY14975
AAB18541
AAR90931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE18689
ABG72261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW34480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU76377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1586107
                                                                                                                                                                                                                                                                                                                            Aae22049
Aae18688
Adc06766
                                                                        Aar31621
Aau84597
                                                                                                                                                                                                                                                       Aap92047
Aar08123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aap90164
Aap92050
Aap90288
                                                                                                                                                                                                                         Aab62633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Abg72261
Adc06767
                                                                                                                                                                                                                                                                                                                                                                                                                                           Aaw40038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aaw34480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aar90931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aab18541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aab18540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aae18689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aau,76377
Sequence
Hepatitis
HCV NS34A
Compiled
HCV polyp
Hepatitis
HCV polyp
HCV-1 pol
Protein s
                                                                                                                                                                                                                                                                                                                     7 Hepatitis
9 HCV-1 NS3
1 HCV-1 NS3
1 HCV-1 MT
1 Peptide e
Peptide e
Peptide e
Protein e
Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  989
```

r. U		44	43	42	41	40	39		3 7	ا 1 ه	i Li	1 is	) (L	i ii	) L	ب د د	2 6	2 0		26
7000	100	3460	3560	3560	3560	3560	3560	3560	3560	3561	3561	3561	3561	3565	4065	4565	3579	OBSE	2583	3583
98.3	20.4	0 0	98.4	98.4	98.4	98.4	98.4	98.4	98.4	98.4	98.4	98.4		98.5	98.5	98.5	98.9	98.9	99.0	99.0
686	210C	3 (	2012	3011	3011	2955	686	686	686	3011	989	989	989	686	686	989	1766	2894	2894	2436
U	σ	١ (	n	σ	Ν	N	7	5	5	N	7	u	υ	7	տ	Ŋ	,	N	N	N
AAE21843	ABU61848	A	AATTOOPING	ABP71460	AAW77397	AAR08124	ABW00370	AAE19919	AAE21840	AAR40120	ABW00358	AAE19907	AAE21838	ABW00351	AAE19900	AAE21837	AAP92041	AAR24440	AAR70230	AAR28582
Aae21843	Abu61848	Aauyy Zy	10000	ahn71460	Aaw77397	Aar08124	Abw00370	Aae19919	Aae21840	Aar40120	Abw00358	Aae19907	Aae21838	Abw00351	Aae19900	Aae21837	Aap92041	Aar24440	Aar70230	Aar28582
μ.	HCV H77 c	Hepatitis	TO OCT	No. of the case of	Henatitis	Hepatitis	Hepatitis	Hepatitis	Hepatitis	HCV genom	Hepatitis	Composite	_	HCV amino						

## RESULT 1 AAU76377 ID AAU76377 ID AAU76377 XX AAU7 XX AAU7 XX Hepa XX Synt XX FF Misc FT Misc F Hepatitis C virus; HCV; NS3/4a conformational epitope; seroconversion; immunoassay solid support; multiple epitope fusion antigen; MEFA; non-structural protein; mutant; mutein. Hepatitis C virus NS3/4a conformational epitope protein sequence AAU76377 standard; protein; 686 AA. 08-MAY-2002 AAU76377; (first entry)

ALIGNMENTS

/note= "Wild-type Thr substituted by Pro" Misc-difference 404Location/Qualifiers Hepatitis C Synthetic. virus. /note= "Wild-type Ser substituted by Ile"

WO200196870-A2.

20-DEC-2001.

14-JUN-2001; 2001WO-US019156.

FI

رز

15-JUN-2000; 2000US-0212082P. 02-APR-2001; 2001US-0280811P. 02-APR-2001; 2001US-0280867P.

(CHIR ) CHIRON CORP.

Chien DY, Arcangel Medina-Selby A; P, Tandeske ŗ George-Nasciemento 'n

D

WPI; 2002-090228/12. N-PSDB; ABK15344.

Immunoassay solid support, useful for detecting hepatitis C virus infection in biological sample, comprises HCV NS3/4a conformation epitope and multiple epitope fusion antigen bound to the support. conformational

Claim 5; Fig 3; 92pp; English

The present invention relates to a new immunoassay solid

661

VVLSGKPAIIPDREVLYREFDEMEEC

```
cc consisting essentially of at least one hepatitis C virus (HCV) NS3/4a cc conformational epitope and a multiple epitope fusion antigen (MEFA), cc bound to the support. The NS3/4a conformational epitope and/or MEFA) cc reacts specifically with anti-HCV antibodies present in a biological reacts specifically with anti-HCV antibodies present in a biological cc sample from an HCV-infected individual. The immunoassay of the invention cc is useful for detecting hepatitis C virus infection in a biological cc sample. The method of the invention provides a sensitive, accurate cc diagnostic and prognostic tool to provide adequate patient care and to prevent transmission of HCV by blood and by blood products, or by cersonal contact. Use of NS3/4a conformational epitope in combination cc with MEFA, provides a sensitive and reliable method for detecting early CC masking problems, improving sensitivity in detecting antibodies by cmasking problems, improving sensitivity in detecting antibodies by combinate, and improving substrate. Detection accuracy is increased and contacted and improving substrate. Detection accuracy is increased and contacted use of highly immunogenic HCV antigens which are present during the early stages of HCV seroconversion. The present amino acid sequence contact in the incidence of highly immunogenic HCV antigens which are present during the early stages of HCV seroconversion. The present amino acid sequence contact the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 686 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                        601
                                                                                                                                              601
                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GDSRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVCTRGVAKAVDFIPVENLETIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTRTIASPKGPVIQMYTNVDQDLVGWPAPQGSRSLTPCTCGSSDLYLVTRHADVIPVRRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAPITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTAAQTFLATCINGVCWTVYHGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KGGRHLIFCHSKKKCDELAAKLVALGINAVAYYRGLDVSVIPPIGDVVVVATDALMTGYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ILGIGTVLDQAETAGARLVVLATATPPGSVTVPHPNIEEVALSTTGEIPFYGKAIPLEVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGCSGGAYDIIICDECHSTDATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGCSGGAYDIIICDECHSTDATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RSPVFTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATLGFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RSPVFTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATLGFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GDSRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVCTRGVAKAVDFIPVENLETTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTRTIASPKGPVIQMYTNVDQDLVGWPAPQGSRSLTPCTCGSSDLYLVTRHADVIPVRRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAPITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTAAQTFLATCINGVCWTVYHGA
VVLSGKPAIIPDREVLYREFDBMEEC
                                                                                                                                                                                                                                                THIDAHFLSQTKQSGENLPYLVAYQATVCARAQAPPPSWDQMWKCLIRLKPTLHGPTPLL
                                                                                                                                                                                                                                                                                                                                                             ERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLFVCQDHLEFWEGVFTGL 540
                                                                                                                                                                                                                                                                                                                                                                                                                                            GDFDSVIDCNTCVTQTVDFSLDPTFTIETITLPQDAVSRTQRRGRTGRGKPGIYRFVAPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GDFDSVIDCNTCVTQTVDFSLDPTFTIETITLPQDAVSRTQRRGRTGRGKPGIYRFVAPG
                                                                                        YRLGAVQNEITLTHEVTKYIMTCMSADLEVVTSTWVLVGGVLAALAAYCLSTGCVVIVGR
                                                                                                                         YRLGAVQNEITLTHPVTKYIMTCMSADLEVVTSTWVLVGGVLAALAAYCLSTGCVVIVGR
                                                                                                                                                                                                        THIDAHFLSQTKQSGENLPYLVAYQATVCARAQAPPSWDQMWKCLIRLKPTLHGPTPLL
                                                                                                                                                                                                                                                                                                                         ERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLPVCQDHLEFWEGVFTGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KGGRHLÍFCHŚKKKCDELAAKLVALGINAVAYYRGLDVSVIPPIGDVVVVATDALMTGYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ILGIGTVLDQAETAGARLVVLATATPPGSVTVPHPNIEEVALSTTGEIPFYGKAIPLEVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 3619; DB 5;
Pred. No. 1.6e-306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                         540
                                                                                           660
                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     닭
```

8

Š 밁

밁 8 밁 멍

8 몽

Ś

8

맒

8

멍

S 멂 8 В Ś g Ş 밁 S

```
RESULT 2
AAE1862
ID AAE18
XX
AAE1862
XX
AAE1862
XX
XX
AX
DI 17-M
XX
XX
Hepa
XX
밁
                                           8
                                                                                                    멍
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE18689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE18689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to hepatitis C virus (HCV) core antigen and S (nonstructural) 1/4a antibody combination assay that can detect both HCV antigens and artibodies present in a sample using a single solid matrix as well as immunoassay solid supports for use in the assay. The solid support is useful for detecting HCV infection in a biological sample. The present sequence is HCV-1 NS3/4a mutant conformational antigen. This sequence is used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunoassay solid support useful for detecting hepatitis infection in a biological sample, comprises at least one antibody and HCV N33/4a epytope, bound to the support.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUN-2000; 2000US-0212082F
02-APR-2001; 2001US-0280811F
02-APR-2001; 2001US-0280867F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers Misc-difference 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatitis C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HCV-1 NS3/4a mutant conformational antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Medina-Selby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chien DY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-JUN-2001; 2001WO-US019369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200196875-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hepatitis C virus type 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΨPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002-179522/23.
                                                   121
121
                                                                                                                                                                                                                                                                                                                              686; Conserv
                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAD29795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                        GDSRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVCTRGVAKAVDFIPVENLETTM 180
                                                                                                                                 GTRTIASPKGPVIQMYTNVDQDLVGWPAPQGSRSLTPCTCGSSDLYLVTRHADVIPVRRR 120
                                                                                                                                                                                                                                                      MAPITAYAQQTRGLIGCIITSLTGRDKNQVEGEVQIVSTAAQTFLATCINGVCWTVYHGA
                                                                                                                                                                                                                 MAPITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTAAQTFLATCINGVCWTVYHGA
                                                                                                          GTRTIASPKGPVIQMYTNVDQDLVGWPAPQGSRSLTPCTCGSSDLYLVTRHADVIPVRRR
GDSRGSLLSPRPISYLKGSSGGPLLCPAGHAVGIFRAAVCTRGVAKAVDFIPVENLETTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fig 4; 87pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arcangel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virus; NS3/4a antigen; HCV infection; mutant; muteir
                                                                                                                                                                                                                                                                                                                              100.0%; Score 3619; DB 5; ilarity 100.0%; Pred. No. 1.6e-306; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                           AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "Wild type Ser substituted with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note= "Wild type Thr substituted with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                £nglish.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tandeske L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              George-Nasciemento
                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C virus
of HCV anti-core
                                                                                                                                                                                                                                                                                                                                                                                       686;
                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coit
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ü
                                                                                                             120
                                                                                                                                                                                                                          60
```

```
Database
                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                        Post-processing:
                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                    A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
       8 7 6 5 4
                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                      1586107 seqs, 282547505 residues
                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-658-782-4
4455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       June 21, 2004, 10:18:09 ; Search time 49.4736 Seconds (without alignments) 4734.482 Million cell updates/sec
                                                                                                                                                                   Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                      MATKAVCVLKGDGPVQGIIN......GNKDRRSTGKSWGKPGYPWP 829
                                               geneseqp1980s:*
geneseqp1990s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd
geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                                                                                               ٠.٠
                                                                                                                                                                                                                                                                                       1586107
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

K.	24	23	22	21	20	19	18	17	1.6	, L	14	13	12	11	10	. 9	00	7	101	, Un	4	، س	) N	, ш	No.	Result
1623	1623	1623	1623	1623	1623	1624.5	4.	•	1624.5		1624.5	1624.5	1624.5	1624.5	1624.5	1624.5	1627.5	2222	2222	2222	4032	4032	4455	4455	Score	
36.4		36.4	36.4	36.4		ð	σ	σ	9	36.5	. 36.5	36.5	36.5	36.5	36.5	36.5	36.5	49.9	49.9	٠	90.5	90.5	٠	100.0	Match	Query
781	781	781	781	781	781	3011	3011	3011	3011	3011	2955	2955	2772	2436	2436	2261	1766	1021	1021	1021	1099	1099	829	829	Length	
Ν	N	N	N	N	N	σ	N	N	N	N	ω	Ŋ	w	_	H	_	ب	σı	N	N	σ	v	7	UΊ	BB	
AAR52690	AAR33574	AAR33594	AAR33632	AAR21565	AAR22208	AAE22049	AAW40038	AAW34480	AAR90931	AAR21519	AAB18541	AAY14975	AAB18540	AAP90288	AAP92050	AAP90164	AAP92041	AAE22050	AAW40039	AAW34481	ABG72262	AAU76378	ADC06769		ID	
Aar52690	Aar33574	Aar33594	Aar33632	Aar21565	Aar22208			Aaw34480	Aar90931	Aar21519	Aab18541	Aav14975	Aab18540	Aap90288	Aap92050	Aap90164	Aap92041	Aae22050	Aaw40039	Aaw34481	Abq72262	Aau76378	Adc06769	Aae18690	Description	
	200	HCV CKS-	HCV CKS-	HCV CKS	Sequence	Hepatitis	HCV polyp	HCV polyp	Hepatitis	Compiled	Polyprote	Amino aci	Protein e			Peptide e	Hepatitis	pSOD/c200	Fusion or	HCV antiq	HCV mult		meri	Multiple	ion	

Chien DY, Arca: Medina-Selby A;

Arcangel P,

Tandeske L,

George-Nasciemento C,

Coit

Ü

WPI; 2002-179522/23. N-PSDB; AAD29796.

The present invention relates to hepatitis C virus (HCV) core antigen and NS (nonstructural) 3/4a antibody combination assay that can detect both HCV antigens and antibodies present in a sample using a single solid

Immunoassay solid support useful for detecting hepatitis C virus infection in a biological sample, comprises at least one of HCV antibody and HCV NS3/4a epitope, bound to the support.

anti-core

Disclosure; Fig 7; 87pp; English.

. <u>4.</u> U	44	43	42	41	40	39	38	37	36	ų.	14	ω ω	32	31	30	29	28	27	26
1597.5	1597.5	1597.5	1597.5	1597.5	1597.5	1597.5	1597.5	1600.5	1605.5	1608.5	1614.5	1614.5	1615.5	1616.5	1619.5	1621.5	1621.5	1622.5	1623
35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	36.0	36.1	36.2	36.2	36.3	36.3	36.4	36.4	36.4	36.4	36.4
3011	3011	3011	3011	3011	2984	2631	2202	2955	1786	2436	3011	2894	2435	2816	2894	2772	2301	3011	781
N	N	N	Ŋ	Ŋ	4	δ	თ	N	ب	N	N	N	N	N	N	N	ب	Ŋ	4
AAW98020	AAW98021	AAW77398	AAW77397	AAR40120	AAE00442	AA026785	AA026783	AAR08124	AAP90158	AAR28582	AAR31621	AAR70230	AAR25135	AAR34009	AAR24440	AAR08123	AAP92047	AAU84597	AAB51372
			_	_			-		~	٠٠	Aar31621 Hepatitis	_	HCV t			7	Sequ	HCV	Aab51372 HCV recom

## ALIGNMENTS

```
RESULT 1
AAE18690
ID AAE1
XX AAE1
AC AAE1
XX Hepa
XX Hepa
XX Hepa
XX Hepa
XX Hepa
XX Hepa
XX WISc
FT Misc
FT M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUN-2000; 2000US-0212082P.
02-APR-2001; 2001US-0280811P.
02-APR-2001; 2001US-0280867P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-JUN-2001; 2001WO-US019369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200196875-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepatitis C virus; NS3/4a antigen; multiple epitope fusion antigen; HCV infection; MEFA 12 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Multiple epitope fusion antigen (MEFA) 12 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE18690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE18690 standard; protein; 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Encoded by GAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note= "Encoded by ATG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEC LID NOTE
```

```
RESULT 2
ADC06769
AXU
                                                                                                B
                                                                                                                    S
                                                                                                                                                      뮰
                                                                                                                                                                                Ş
                                                                                                                                                                                                               В
                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                             Дd
                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          និងនិងនិង
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    matrix as well as immunoassay solid supports for use in the assay. The solid support is useful for detecting HCV infection in a biological sample. The present sequence is MEFA (multiple epitope fusion antigen) protein. This sequence is used in the exemplification of the invention
                         ADC06769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                   721
                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                  109
                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                          781
                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AARTTSGITSIFSPGASQNIQLITSTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          829
                                                                                                                                                                                                                                                                                                                                                                                                         HQEKEKVLGLIDNDQVVVTPDKEILYBAFDEMEECASKAALIEEGGRMAEMLKSKIQGLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MATKAVCVLKGDGPVQGIINFEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTS
                                                                                                                                                                                                                                                                                            ETWKKPDYEPPVVHGRSSRRFAQALPWARPDYNPPLVETWKKPDYEPPVVHGRKTKRNT
                                                                                                                                                                                                                                                                                                                                                GILRRHVGPGEGAVQWMRLIAFASRGNHVSPTHYVPSRSRRFAQALPVWARPDYNPPLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPYIEQGMMLAEQFKQKALGLSRGGKPAIVPDKEVLYQQYDEMEECSQAAPYIEQAQVIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGGAYDIIICDECHSTDATSILGIGTVLDQAETAGARLVVLATATPPGSVTVPHPNIEEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AQGYKVLVLNPSVAATLGFGAYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGPHFNPLSTRGCNCSIYPGHITGHRMAWKLGSAARTTSGFVSLFAPGAKQNETHVTGGA
                        standard;
                                                                                                ATRKTSPIPKARRPEGRTWAQPGYPWPLYGNKDRRSTGKSWGKPGYPWP
                                                                                                                 ATRKTSPIPKARRPEGRTWAQPGYPWPLYGNKDRRSTGKSWGKPGYPWP
                                                                                                                                                                          YGNKDRRSTGKSWGKPGYPWPRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVL
                                                                                                                                                                                                               NRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVLATRKTSPIPKARRPEGRTWAQPGYPWPL
                                                                                                                                                                                                                                           NRRPODVKFPGGGQIVGGVYLLPRRGPRLGVLATRKTSPIPKARRPEGRTWAQPGYPWPL
                                                                                                                                                                                                                                                                                                                                 GILRRHVGPGEGAVQWMNRLIAFASRGNHVSPTHYVPSRSRRFAQALPVWARPDYNPPLV
                                                                                                                                                                                                                                                                                                                                                                                       HQFKEKVLGLIDNDQVVVTPDKEILYEAFDEMEECASKAALIEEGQRMAEMLKSKIQGLL
                                                                                                                                                                                                                                                                                                                                                                                                                                               LPYIEQGMMLAEQFKQKALGLSRGGKPAIVPDKEVLYQQYDEMEECSQAAPYIEQAQVIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPTSGDVVVVATDALMTGYTGDFDSVIDCNTCACSGKPAIIPDREVLYREFDEMEECSQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPTSGDVVVVATDALMTGYTGDFDSVIDCNTCACSGKPAIIPDREVLYREFDEMEECSQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALSTTGEIPFYGKAIPLEVIKGGRHLIFCHSKKKCDELAAKLVALGINAVAYYRGLDVSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALSTIGEIPFYGKAIPLEVIKGGRHLIFCHSKKKCDELAAKLVALGINAVAYYRGLDVSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGGAYDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AQGYKVLVLNPSVAATLGFGAYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AARTTSGLTSLFSPGASQNIQLITSTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGPHENPLSTRGCNCSIYPGHITGHRMAWKLGSAARTTSGFVSLFAPGAKQNETHVTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MATKAVCVLKGDGFVQGIINFEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :IICDECHSTDATSILGIGTVLDQAETAGARLVVLATATPPGSVTVPHPNIEEV
                        protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 4455; DB 5;
Pred. No. 1.7e-310;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              829;
                                                                                              829
                                                                                                                          829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                        780
                                                                                                                                                                                   780
                                                                                                                                                                                                               720
                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

ADC06769;

```
Ş
                                 В
                                                                                  뭥
                                                                                                      8
                                                                                                                                  g
                                                                                                                                                         Ś
                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                          The invention relates to a novel immunoassay solid support comprising at least one hepatitis C virus (HCV) anti-core antibody and at least one isolated HCV N33/A (non-structural protein 3/4a) epitope bound thereto. The system of the invention may be useful for detecting HCV infection in a biological sample and for treating or detecting non-A, non-B hepatitis (NANB hepatitis). The current sequence is that of the chimeric multiple epitope fusion antigen 12 (MEFA12) protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                            Immunoassay solid support for detecting hepatitis C virus infection ibiological samples, comprises a hepatitis C virus anti-core antibody an isolated hepatitis C virus NS3/4a epitope bound HCV anti-core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CHIE/)
(ARCA/)
(TAND/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-JUN-2000; 2000US-0212082P.
02-APR-2001; 2001US-0280811P.
02-APR-2001; 2001US-0280867P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified.
Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric multiple epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-DEC-2003
                                                                                                                                                                                                                                   Sequence 879
                                                                                                                                                                                                                                                                                                                                                           Claim 45; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GEOR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chien DY, Arcangel
Medina-Selby A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US2002192639-A1
                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                2003-644609/61.
DB; ADC06770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens.
            181
                                    121
                                                           121
                                                                                   61
                                                                                                                                                                                  100.0%;
al similarity 100.0%;
al similarity 00.0%;
                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHIEN D Y.
) ARCANGEL P.
) TANDESKE L.
) GEORGE-NASCIMENTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        non-B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COIT D.
MEDINA-SELBY
                                                                                                                                                   MATKAVCVLKGDGPVQGIINFEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTS
AQGYKVLVLNESVAATLGFGAYMSKAHGIDENIRTGVRTITTGSEITYSTYGKFLADGGC
                                                                                     AGPHENPLSTRGCNCSIYPGHITGHRMAWKLGSAARTTSGFVSLFAPGAKQNETHVTGGA
                                                                                                   AGPHFNPLSTRGCNCSIYPGHITGHRMAWKLGSAARTTSGFVSLFAPGAKQNETHVTGGA
                                                                                                                                   MATKAVCVLKGDGFVQGIINFEQKESNGFVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTS
                                                  AARTTSGLTSLFSPGASQNIQLITSTDNSSPEVVPQSFQVAHLHAPTGSGKSTKVPAAYA
                                    AARTTSGLTSLFSPGASQNIQLITSTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     solid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        solid support; HCV; NS3/4a; non-structural;
hepatitis; NANB; multiple epitope fusion antigen 12;
                                                                                                                                                                                                                                    Æ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001US-00881239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                          7; 40pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tandeske
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fusion antigen
                                                                                                                                                                                    0,
                                                                                                                                                                                  Score 4455; DB 7;
Pred. No. 1.7e-310;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                George-Nascimento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                    Indels
                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Coit
                                                                                                                                                                                    0,
                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                         ij
                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                            180
                                                                                     120
                                                                                                             120
                                                                                                                                                             60
              240
                                     180
                                                                                                                                     60
```

```
Database :
                                                                                                                                                                                           Minimum
                                                                                                                                                                                                                  Total number
                                                                                                                                                   Post-processing:
                                                                                                                                                                              Maximum
                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                        OM protein -
                                                                                                                                                                           DB seq
                                                                                                                                                                                                              of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                     protein search, using sw model
length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                  US-10-658-782-6
5912
1 MATKAVCVLKGDGPVQGIIN.....GNKDRRSTGKSWGKPGYPWP 1099
                                                                                                                                                                                                                                       1586107 segs,
                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                June 21,
                                                                                                                                                   Minimum Match 0%
                                                                                                                          Listing
                                                                                                                                         Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                          Match 100%
first 45 summaries
                                                                                                                                                                                                                                                                                                                                                 2004, 10:18:09; Search time 65.5868 Seconds (without alignments) 4734.482 Million cell updates/sec
                                                                                                                                                                                                                                        282547505
                                                                                                                                                                                                                                        residues
                                                                                                                                                                                                                1586107
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

S
S
ış
5
Þ
H
ä

25	2 4	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	89	7	6	ហ	4	· W	ν		No.	Result	
2906.5	2909.5	909.	2909.5	2909.5	2909.5	2909.5	2909.5	2909.5	909	2909.5	3042.5	3047.5	3047.5	047	050	050	050	829	3829.5	3829.5	4032	4032	5912	5912	Score		
49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2	49.2			51.5	51.5		51.6	51.6	64.8	64.8	64.8	68.2	68.2	100.0	100.0	Match	Query	ò
2301	3011	3011	3011	3011	2955	2955	2772	2436	2436	2261	840	841	841	841	841	841	841	1021	1021	1021	829	829	1099	1099	Match Length		
1	ψ	N	N	N	w	N	ω	س	ш	<u>س</u>	Ŋ	N	N	N	7	σ	N	Çī	N	N	7	ъ	σ	ហ	BB		
AAP92047	AAE22049	AAW40038	AAW34480	AAR90931	AAB18541	AAY14975	AAB18540	AAP90288	AAP92050	AAP90164	AAR14349	AAW97609	AAW46397	AAW01701	ADA07875	ABO27020	AAR68547	AAE22050	AAW40039	AAW34481	ADC06769	AAE18690	ABG72262	AAU76378	ID		
Aap92047 Sequence		_	~	_						Aap90164 Peptide e				•					Ę			Mult	VOH	HCV mul	Description		

The present invention relates to a new immunoassay solid support consisting essentially of at least one hepatitis C virus (HCV) NS3/4a conformational epitope and a multiple epitope fusion antigen (MEFA), bound to the support. The NS3/4a conformational epitope and/or MEFA reacts specifically with anti-HCV antibodies present in a biological sample from an HCV-infected individual. The immunoassay of the invention

detecting hepatitis C virus infection in a biological

Immunoassay solid support, useful for detecting hepatitis C virus infection in biological sample, comprises HCV NS3/4a conformational epitope and multiple epitope fusion antigen bound to the support.

N-PSDB; ABK15345.

Claim 5; Fig 5; 92pp; English.

45	44	43	42	41	40	39	38	37	36	35	4.	i i	32	31	30	29	20	27	20
2868	2868	2868	2875	2875	2875	2875	2877.5	2880.5	2883.5	2890.5	2890.5	2891.5	2893.5	2895.5	2896.5	2897.5	2900.5	2900.5	2906.5
48.5	48.5	48.5	48.6	48.6	48.6	48.6	48.7	48.7	48.8	48.9	48.9	48.9	48.9	49.0	49.0	49.0	49.1	49.1	49.2
3011	3011	2984	3012	3012	3011	3011	3011	2955	2436	2894	1786	3011	2816	2894	1766	2435	3011	3011	2772
2	N	4	σ	U	σ	N	ഗ	N	N	N	H	N	N	N	μ	N	v	N	N
AAW98021	AAW77398	AAE00442	ABU61848	AAU99289	ABP71460	AAW77397	AAE22052	AAR08124	AAR28582	AAR70230	AAP90158	AAR31621	AAR34009	AAR24440	AAP92041	AAR25135	AAU84597	AAR21519	AAR08123
Aaw98021	Aaw77398	Aae00442	Abu61848	Aau99289	Abp71460	Aaw77397	Aae22052	Aar08124	Aar28582	Aar70230	Aap90158	Aar31621	Aar34009	Aar24440	Aap92041	Aar25135	Aau84597	Aar21519	Aar08123
Infection	Hepatitis	Hepatitis	HCV H77 c	Hepatitis	Amino aci	Hepatitis	Hepatitis	Hepatitis	HCV amino	Composite	Protein s	Hepatitis	HCV-1 pol	Composite	Hepatitis	HCV polyi	HCV polyp	Compiled	Hepatitis

```
RRESULT 1
AAU76378
ID AAU7
XX AAU7
XX AAU7
XX AAU7
XX Hepa
XX Hepa
XX Hepa
XX Hepa
XX Hepa
XX WO20
XX Synt
XX WO20
XX WO20
XX WO20
XX WO20
XX WO20
XX INFU
PR 14-J
XX INFU
PR 02-A
PR 02-A
PR 02-A
PR 02-A
PR 02-A
PR WPI;
INFU
PT INFU
PT INFU
PT infe
PT inf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-JUN-2000; 2000US-0212082P.
02-APR-2001; 2001US-0280811P.
02-APR-2001; 2001US-0280867P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Medina-Selby A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chien DY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-JUN-2001; 2001WO-US019156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200196870-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatitis C virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   non-structural protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hepatitis C virus; HCV; NS3/4a conformational epitope; seroconversion; immunoassay solid support; multiple epitope fusion antigen; MEFA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HCV multiple epitope fusion antigen (MEFA) 7.1 protein sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU76378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU76378 standard; protein; 1099 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-090228/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arcangel P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tandeske L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OF ON AH SUNO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  George-Nasciemento C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Coit D;
```

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sample. The method of the invention provides a sensitive, accurate diagnostic and prognostic tool to provide adequate patient care and to prevent transmission of HCV by blood and by blood products, or by personal contact. Use of NS3/4a conformational epitope in combination with MEFA, provides a sensitive and reliable method for detecting early HCV seroconversion. Use of MEFA has the added advantages of decreasing masking problems, improving sensitivity in detecting antibodies by allowing a greater number of epitopes on a unit surface area of substrate, and improving substrate. Detection accuracy is increased and the incidence of false results is reduced because of the identification and the use of highly immunogenic HCV antigens which are present during the early stages of HCV seroconversion. The present amino acid sequence represents the multiple epitope fusion antigen (MEFA) 7.1 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1099 AA;
           721
                                                721
                                                                                              661
                                                                                                                                          199
                                                                                                                                                                                      601
                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ
CSQHLPYIEQGWMLAEQFKQKALGLSRGGKPAIVPDKEVLYQQYDEMBECSQAAPYIEQA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                         CSQHLPYIEQGMMLAEQFKQKALGLSRGGKPAIVPDKEVLYQQYDEMEECSQAAPYIEQA
                                                                                     PLLYRLGAVQNEITLTHPVTKYIMTCMSADLEVVTSACSGKPAIIPDREVLYREFDEMEE
                                                                                                              PLLYRLGAVQNEITLTHFVTKYIMTCMSADLEVVTSACSGKPAIIPDREVLYREFDENEE
                                                                                                                                                                                                      TGLTHIDAHFLSQTKQSGENLPYLVAYQATVCARAQAPPSWDQMWKCLIRLKDTLHGPT
                                                                                                                                                                                                                                                                APGERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLPVCQDHLEFWEGVF
                                                                                                                                                                                                                                                                                           APGERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPGLPVCQDHLEFWEGVF
                                                                                                                                                                                                                                                                                                                                                     GYTGDFDSVIDCNTCVTQTVDFSLDFTFT1ET1TLFQDAVSRTQRRGRTGRGKFGIYRFV
                                                                                                                                                                                                                                                                                                                                                                                 GYTGDFDSVIDCNTCVTQTVDFSLDPTFTIETITLPQDAVSRTQRRGRTGRGKPGIYRFV
                                                                                                                                                                                                                                                                                                                                                                                                                                               EVIKGGRHLIFCHSKKKCDELAAKLVALGINAVAYYRGLDVSVIPTSGDVVVVATDALMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EVIKGGRHLIFCHSKKKCDELAAKLVALGINAVAYYRGLDVSVIPTSGDVVVVATDALMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATSILGIGTVLDQAETAGARLVVLATATPPGSVTVPHPNIEEVALSTTGEIPFYGKAIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATSILGIGTVLDQAETAGARLVVLATATPPGSVTVPHFNIEEVALSTTGEIFFYGKAIPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GFGAYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGCSGGAYDIIICDECHSTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GFGAYMSKAHGIDPNIRTGVRTITTGSPITYSTYGKFLADGGCSGGAYDIIICDECHSTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIMRSPVFTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTMRSPVFTDNSSPPVVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AARTTSGFVSLFAPGAKQNETHVTGGAAARTTSGLTSLFSPGASQNIQLIVDFIPVENLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HEKADDLGKGGNEESTKTGNAGSRLACGVIGIAQNLNSGCNCSIYPGHITGHRMAWKLGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HEKADDLGKGGNEESTKTGNAGSRLACGVIGIAQNLNSGCNCSIYPGHITGHRMAWKLGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGPHFNPLSRKHGGPKDEERHVGDLGNVTADKDGVADVSIEDSVISLSGDHCIIGRTLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGPHFNPLSRKHGGPKDEERHVGDLGNVTADKDGVADVSIEDSVISLSGDHCIIGRTLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MATKAVCVLKGDGPVQGIINFEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MATKAVCVLKGDGPVQGIINFEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AARTTSGFVSLFAPGAKQNETHVTGGAAARTTSGLTSLFSPGASQNIQLIVDFIPVENLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                          QTKQSGENLPYLVAYQATVCARAQAPPPSWDQMWKCLIRLKPTLHGPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 5912;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ა
ს
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                           780
                                                                                     720
                                                                                                                                 720
                                                                                                                                                                             660
                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

5 B

5 8 8

상점

Ş g Ś 당 Š B 8 B Ś 뮍 Ş В Ś 망 Ś 밁 B

```
RESULT 2
REGULT 2
RBG772262
ID ABG7
XX ABG7
XX O6-M
XX IMMU
XX IMMU
XX IMMU
XX IMMU
XX HCV
XX MEPA
OS Hepa
OS Hepa
OS Hepa
OS Hepa
OS Hepa
OS Hepa
FT Regi
    22222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
             Region
                                                                                                                                                                                                                                                                                                                                                            Hepatitis
Hepatitis
                                                Region
                                                                                                                                                       Region
                                                                                                                                                                                           Region
                                                                                                                                                                                                                              Region
                                                                                                                                                                                                                                                    Region
                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                     Immunoassay solid support; Hepatitis C Virus type/1; HCV-1; HCV-2; NS3/4a conformational epitope; multiple epitope fusion antigen 7.1; MEFA 7.1; anti-HCV antibody; NS3/4a conformational antigen; HCV-3; HCV infection; Hepatitis C Virus type-2; Hepatitis C Virus type-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HCV multiple epitope fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABG72262;
                                                                                                                                                                                                                                                                                                                           Chimeric
                                                                                                                                                                                                                                                                                                                                                Hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABG72262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                               mutein.
                                                                                                                                                                                                                                                                                                                                               s C virus type :
s C virus type :
s C virus type :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QVIAHQEXEKVLGLIDNDQVVVTEDKEILYEAFDEMEECASKAALIEEGQRMAEMLKSKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NKDRRSTGKSWGKPGYPWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GKPGYPWPRKTKRNTNRRPQDVKFPGGGQIVGRRGPPIPKARRPEGRTWAQPGYPWPLYG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRNTNRRPQDVKFPGGGQIVGRRGPPIPKARRPEGRTWAQPGYPWPLYGNKDRRSTGKSW 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLVETWKKPDYEPPVVHGRSSRRFAQALPVWARPDYNPPLVETWKKPDYEPPVVHGRKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLVETWKKPDYEPPVVHGRSSRRFAQALPVWARPDYNPPLVETWKKPDYEPPVVHGRKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QGLLGILRRHVGPGEGAVQWMNRLIAFASRGNHVSPTHYVPSRSRRFAQALPVWARPDYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QGLLGILRRHVGPGEGAVQWMNRLIAFASRGNHVSPTHYVPSRSRRFAQALPVWARPDYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QVIAHQFKEKVLGLIDNDQVVVTPDKEILYEAFDEMEECASKAALIEEGQRMAEMLKSKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GKPGYPWPRKTKRNINRRÞÓDVKFÞGGGOIVGRRGÞÞIÞKARRÞEGRTWAQÞGYÞWÞLYG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KRNTINRRPQDVKFPGGGQIVGRRGPPIPKARRPEGRTWAQPGYPWPLYGNKDRRSTGKSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                     699.
                                                                                                                                        /note= "Correspond
                                                                                                                                                              200. .230
/note= "Correspond to consensus sequence 384-414 of HCV-1 and HCV-2 E2 HVR"
                                                                                                                                                                                                                                                   /note= "Correspond to amino acids 1-156 of
superoxide dismutase)"
159./.176
                                 797. .843
/note= "Correspond
                                                                                   1 epitope"
748. .794
                                                                                                                               helicase"
                                                                                                       'note= "Correspond
                                                                                                                                                                                                    390-410 of HCV-1
                                                                                                                                                                                                                                                                                                 Location/Qualifiers
  note=
                                                                     note= "Correspond
                                                                                                                                                                                                                                      note= "Correspond to amino acids 303-320
           epitope*
                                                       epitope"
                                                                                                                                                                                                                                                                                       .156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                 .794
                                                                                                                                                                                                                            .199
 "Correspond
                                                                                                                                                                                                    "Correspond to consensus
of HCV-1 E2 HVR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antigen 7.1 (MEFA 7.1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿
 ő
                                   ö
                                                                     ö
                                                                                                                                         6
                                                                                                         6
amino acids 1901-1936 of HCV-1
                                   amino
                                                                     amino
                                                                                                        amino
                                                                                                                                         amino
                                  acids 1689-1735
                                                                     acids 1689-1735
                                                                                                       acids 1689-1735
                                                                                                                                         acids 1193-1658
                                                                                                                                                                                                               sequence
                                                                                                                                                                            0£
                                                                                                                                                                                                               0f
                                                                                                                                                                                                                                      of HCV-1 E1"
                                                                                                                                                                                                                                                                         HCV-1 hSOD
                                                                     of.
                                  of HCV-2
                                                                                                       of HCV-1 5-1-
                                                                                                                                         윥
                                                                                                                                                                           amino
                                                                                                                                                                                                               amino
                                                                     HCV-3 5-1-
                                                                                                                                         HCV-1
                                                                                                                                                                                                               acids
                                  5-1-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
```